

USAWC STRATEGY RESEARCH PROJECT

NATO'S NUCLEAR FORCES: THE WAY AHEAD

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ABSTRACT

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The North Atlantic Treaty Organization (NATO) has maintained nuclear forces in Europe for over forty years. These forces, consisting of US nuclear gravity bombs, UK submarine-launched warheads mounted on Trident missiles, and allied dual capable aircraft (DCA) squadrons, exist to support the alliance's Strategic Concept. Concurrent with the effort to transform the military forces of the United States, NATO is also undergoing a transformation effort--the streamlining of its command structure and the activation of Allied Command Transformation are but two examples. This paper argues that in light of current reform efforts, the United States and its alliance partners should also examine the strategic role of nuclear weapons within NATO with a view towards updating the current nuclear force structure and operational methodology. The paper examines three force structure options: a reduction in nuclear weapons stockpiles and the activation of a European-based multinational DCA wing; retention of the current NATO nuclear operational methodology but adjusting the basing concept to take into account potential threats from the alliance's Southern Region; and, the removal of US nuclear weapons from Europe and establishment of a CONUS-based NATO nuclear capability that leverages US global strike capabilities but still satisfies NATO's Strategic Concept and its requirements for burden sharing across the alliance.

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NATO'S NUCLEAR FORCES: THE WAY AHEAD

For over forty years, the North Atlantic Treaty Organization (NATO) has maintained a nuclear weapons presence in Europe to support its strategic objectives. As the strategic environment has changed during this period, so has the structure of the alliance's nuclear forces. At one point, the alliance maintained a force numbering over 7000 nuclear capable artillery projectiles, mines, missiles, and aircraft-deliverable bombs.¹ This force was composed overwhelmingly of American weapons. A stockpile of this magnitude was considered necessary in a Cold War "where the Soviet Bloc was assumed to command a tremendous advantage in geopolitical position and conventional forces [and] where the existence of nuclear weapons thus had to be regarded by Americans as an antidote to this Soviet advantage".² With the collapse of the Soviet Union, President George H.W. Bush's nuclear initiative of 1991 directed a major restructuring of all US nuclear forces. Upon its completion, only aircraft-delivered gravity bombs remained as the US nuclear presence in Europe. Although subsequent reductions have taken place, there still remains a sizeable nuclear weapons presence positioned in support of the alliance. Deliverable by US and allied Dual Capable Aircraft (DCA), these weapons and a number of NATO-committed UK nuclear warheads mated to Trident submarine-launched ballistic missiles (SLBM) now constitute the alliance's nuclear forces. With the diminished threat of a resurgent Russia and the ongoing expansion of NATO to the former members of the Warsaw Pact, there are calls to revisit the requirement for a NATO nuclear force and to revamp alliance nuclear force structure. Proposals for restructuring the alliance nuclear forces in Europe vary from adjusting the current stockpile to the total removal of US nuclear weapons from the continent, and even to reevaluating the role of nuclear weapons within the alliance. The rationale for removal is based on a variety of reasons. The absence of a discernable threat to the security of the alliance and the claim that non-strategic nuclear weapons are "self-detering"--that is, the effects of their use are so great that they preclude their actual employment—are but two.

NATO's current nuclear force structure has been reduced by 85% since its peak.³ But what remains is a smaller version of the Cold War structure. As the alliance moves toward more out-of-area operations and significant organizational transformation, its nuclear component remains almost untouched. Does this reflect a deliberate policy decision to maintain a status quo nuclear arrangement or is it an indication that the role of nuclear forces in a transformed NATO has yet to be determined by alliance leadership? This paper examines the current NATO policy on nuclear weapons in the context of the developing strategic environment.

Concluding that there is still a requirement for nuclear forces within the alliance, the paper recommends a restructuring of these forces so they can better accomplish the alliance's strategic objectives. The paper then proposes three options (focusing on the US-provided nuclear weapons) for an alliance nuclear force structure that supports the current NATO Strategic Concept but also reflects a transformational approach relevant to the current strategic environment.

CURRENT NATO NUCLEAR WEAPONS POLICY

NATO policy regarding the role of nuclear weapons is set forth in the alliance's Strategic Concept, stating:

The fundamental purpose of the nuclear forces that remain is political: to preserve peace and prevent coercion. They make the risks of aggression against NATO incalculable and unacceptable in a way that conventional forces alone cannot. Together with an appropriate mix of conventional capabilities, they also create real uncertainty for any potential aggressor who might contemplate seeking political or military advantage through the threat or use of weapons of mass destruction against the alliance. By deterring the use of nuclear, biological and chemical weapons, the alliance's forces also contribute to alliance efforts aimed at preventing the proliferation of these weapons and their delivery means.⁴

Interestingly, the Strategic Concept does not ascribe a military purpose to the nuclear forces of the alliance. It instead states that the purpose of the alliance's nuclear weapons is political. If this is the case, then presumably the *size and composition* of the alliance's nuclear forces are not as important as the fact that there *are* alliance nuclear forces. The Strategic Concept then goes on to address the political purpose of these weapons:

The collective security provided by NATO's nuclear posture is shared among all members of the alliance. Moreover, the presence of US nuclear forces based in Europe, committed to NATO, reinforces the political and military link between the European and North American members of the alliance. At the same time, the participation of non-nuclear countries in the implementation of the alliance's nuclear policies demonstrates alliance solidarity as well as the common

commitment of its member countries to maintaining their security and the widespread sharing among them of responsibilities and risks.⁵

For the United States, the key phrase in this excerpt is “collective security.” This means that each member of the alliance will make some contribution to enhance its overall effectiveness. With regard to the alliance’s nuclear forces, the United States and United Kingdom provide nuclear weapons while other NATO members provide delivery systems, basing facilities, site security, planning expertise, and other contributions.

POLITICAL PRIMACY

The political purposes behind the alliance’s nuclear forces then boil down to the following: preserve peace, prevent coercion, deter the use of WMD against the alliance, and reinforce the US-European trans-Atlantic link.⁶ To further underscore the primacy of the political objectives and de-emphasize the military utility of alliance nuclear forces, the Strategic Concept states that:

The Allies concerned consider that, with the radical changes in the security situation, including reduced conventional force levels in Europe and increased reaction times, NATO’s ability to defuse a crisis through diplomatic and other means or, should it be necessary, to mount a successful conventional defence has significantly improved. The circumstances in which any use of nuclear weapons might have to be contemplated by them are therefore extremely remote.⁷

This presents a key challenge for strategic planners in that there is no clear metric for structuring a force to accomplish a purely political objective. Buteux writes, “The alliance has a policy with respect to nuclear weapons, but it is questionable whether it has a strategy.”⁸ If we follow the ends-ways-means methodology of strategy development, there is a disconnect in formulating the ways to achieve the ends. The follow-on effect is that without articulated ways, there is difficulty in determining the means that would be used to implement the strategy. The Strategic Concept states the objective (ends) of the nuclear force and further clarifies some of its characteristics such as which members are contributing nuclear weapons for alliance use, the general form of alliance nuclear forces, and their status with regard to targeting. However,

there does not appear to be any policy statement of how (the ways) the force would serve to attain the ends. For example there is no publicized operational concept, no advertisement of alliance nuclear capabilities, and no statement over the circumstances that may drive NATO to consider nuclear weapons use. This is a fundamental disconnect. Without a clear articulation of just how the alliance's nuclear weapons are to be used in preserving peace, preventing coercion, deterring WMD, and enhancing the trans-Atlantic link, it would be difficult if not impossible to build the alliance political consensus necessary to restructure the nuclear force (the means). Furthermore, without clear political guidance, the alliance's nuclear forces by default become irrelevant to the current strategic environment. That is, they retain their structure and posture as a "Cold-War light" force. The current situation is not one of resources driving strategy, or even one of strategy driving resources. Instead, there is no clear link between the strategy and the resources.

Given this set of circumstances, how do nuclear weapons support NATO's Strategic Concept? Looking at the first political objective--preserving peace, the alliance's nuclear forces appear to serve as a hedge against potential security threats. The operative word is "potential." NATO's nuclear forces are postured to reflect a stable European security environment. Alliance DCA have, in the words of NATO's Nuclear Planning Group, "been further adapted and readiness requirements for these aircraft have been further relaxed."⁹ The UK ballistic missile submarines committed to the alliance are also on a reduced state of readiness. The submarine's missiles are not targeted and are normally at several days "notice to fire".¹⁰ Despite this relaxation, Stanley Sloan writes that:

It is possible to argue that Russia for the foreseeable future will deploy strategic nuclear forces far superior to the French and British nuclear capabilities. Given continued uncertainties about the future of democracy in Russia, it is only prudent, according to this perspective, to sustain a U.S. nuclear guarantee for Europe and to deploy the nuclear and conventional forces that will make that guarantee credible. Others have argued that, in addition to uncertainties about Russia, potential security threats from North Africa and the Middle East warrant a continued U.S. nuclear contribution to NATO.¹¹

These concerns, while at odds with the positive view of increased political and military partnership, cooperation and dialogue with Russia expressed in the Strategic Concept, seem to represent a prudent view of potential instability that could breed crises. In fact, the Strategic Concept goes on to express the following concern: “The existence of powerful nuclear forces outside the alliance also constitutes a significant factor which the alliance has to take into account if security and stability in the Euro-Atlantic area are to be maintained.”¹² This alliance statement also seems to track with the concerns expressed in the US Nuclear Posture Review regarding concerns over the future of Russia as well as its nuclear capabilities.¹³ Given these concerns, the presence of nuclear forces in Europe offers some reassurance to European members of the alliance and discourages the pursuit of nuclear status by additional NATO members. According to analyst David Yost,

There is also a view that NATO nuclear forces actually enhance Russian security: Western analyses hold that the US military and nuclear presence in NATO Europe actually serves Russian security interests by helping to discourage the renationalisation, nuclear proliferation, and the formation of new competitive coalitions. It is likely that some Russian politicians and analysts understand and appreciate the merits of this argument. However, acknowledging that NATO and the US military and nuclear presence in Europe benefit Russian security would be neither popular nor career-enhancing, either for a politician or an international affairs analyst.¹⁴

The preservation of peace, however, includes not only the ability to deal with threats to the alliance. It also includes tailoring the force structure such that it does not overtly threaten the security of non-member states or groups. The Strategic Concept emphasizes that in the argot of NATO, its nuclear forces consist of “substrategic weapons,” only non-intercontinental range nuclear weapons delivered by the alliance’s Dual-Capable Aircraft and the UK Trident-delivered weapons committed to the alliance.¹⁵ Use of the term “substrategic” would seem to amplify the Strategic Concept’s view that their potential use would be extremely remote. Further supporting the non-threatening posture of these weapons is that NATO nuclear forces are not aligned against formal targets.¹⁶

PREVENTING COERCION

NATO nuclear forces support the alliance's second strategic objective—preventing coercion—by projecting a credible, but non-threatening, demonstration of NATO military power. That is, they assure the members of the alliance that there exists a sufficient military capability such that NATO members will not be subject to intimidation arising from an adversary's perception of alliance weakness. In attaining this objective, there is a need to balance the perception of weakness against the perception of being a threat—leading to the paradoxical definition that nuclear strategy is the political maneuvering and the deployment of nuclear weapons whose purpose is to ensure they are never used.¹⁷

This balance creates perceptions that can lead to difficulty for planners. Recall that although the alliance seeks to prevent coercion, it does not undertake active nuclear strike planning. Strike planning is a demonstration that a capability exists and there is a will to use that capability if necessary.¹⁸ Alliance policy makers interpret active nuclear planning as an activity that is not appropriate for the current strategic environment. This is inconsistent with US practice.

US nuclear forces have consistently been designed, structured, equipped, and trained according to the premise that the mere possession of nuclear weapons is insufficient. Potential adversaries must perceive that, even in a worst-case situation, US nuclear forces not only will survive attack but also will be able to penetrate enemy defenses to retaliate. Planning for survivability ensures such a capability. Planning for employment demonstrates that the will to use the capability exists. Beyond these deterrence-related concerns, US commanders must have some concept of how nuclear forces might best be employed so as to retain the operational initiative, dominate events, and attain a quick and favorable end to hostilities should deterrence fail.¹⁹

This inconsistency should be considered, however, through the lens of alliance decision-making. Nuclear weapons policy decisions, like other major decisions that emerge from the alliance leadership, are reached by consensus. Since there exists a valid training requirement for alliance forces to maintain proficiency in nuclear weapons-related tasks, exercises take place using a notional continent containing target sets that would conform to a wide range of

contingencies.²⁰ Although this notional planning may not be consistent with US practice, the United States as part of a consensus decision has agreed to abide by this alliance policy under the presumption this is sufficient to maintain a minimum capability for nuclear planning.

DETECTING WMD

The third alliance strategic objective is to deter attacks against the alliance by adversaries using WMD. According to the Strategic Concept,

The alliance's defence posture must have the capability to address appropriately and effectively the risks associated with the proliferation of NBC weapons and their means of delivery, which also pose a potential threat to the Allies' populations, territory, and forces. A balanced mix of forces, response capabilities and strengthened defences is needed.²¹

Do the alliance's nuclear forces adequately address this risk? As currently structured these forces do contribute to the effort to mitigate this risk in terms of both a deterrent and a response capability. With regard to deterrence during crisis, NATO policy states that the alliance will seek, "in cooperation with other organizations, to prevent conflict, or, should a crisis arise, to contribute to its effective management, consistent with international law, including through the possibility of conducting non-Article 5 crisis response operations."²² In the event of crisis involving a WMD-armed adversary, NATO nuclear forces have some utility in preventing escalation to a point that could lead to WMD use against an alliance member or against a non-NATO actor along the periphery of the alliance's Area of Responsibility. Granted, the alliance has such an overwhelming conventional capability that a veiled demarche regarding potential NATO nuclear weapons use is unlikely. But if the alliance seeks to transform itself into a capability-based force, it should retain the capability to leverage its nuclear force as a means of crisis management.

But is the nuclear force capable of deterring WMD across the full range of contingencies? Deterrence has traditionally been defined as having a capability with the will to exercise it. Another explanation is that it involves having the capability to make a credible threat and to communicate that threat.²³ From this perspective does the alliance have the capability to

make a credible threat? Looking at the composition of the current nuclear force based in Europe, perhaps there is room for improvement. The use of submarine launched sub-strategic nuclear devices carries risks that the alliance may not be willing to accept. For example, the Russian missile warning system may incorrectly interpret the launch of a SLBM as an attack on Russia. Should NATO contemplate the use of a DCA-delivered nuclear weapon would the attack be successful, particularly if the adversary has an effective integrated air defense system. Additionally, is the current NATO nuclear weapons stockpile capable of holding the most likely set of targets at risk in a WMD scenario? As an example, consider the potential effectiveness of a DCA-delivered nuclear weapon against a WMD facility that is in a hardened and deeply buried structure. Credibly threatening such a facility would likely require an earth-penetrating weapon. It is unclear if the nuclear gravity bombs in NATO's arsenal are of an earth-penetrating variant. If not, then the inclusion of these weapons within the Europe-based stockpile would require political approval—a process that carries additional risks in building alliance consensus.²⁴

THE TRANSATLANTIC LINK

The final strategic objective for the alliance is to preserve the transatlantic link between the United States and Europe. The positioning of US nuclear weapons is not merely the garrisoning of forces in an allied state, it is part of an effort that has been termed as *geopresence*—a multifaceted presence that allows the US military to operate in any region of the world, promoted by conscious diplomatic, economic, military, and political involvement in the given region and with the required countries.²⁵ Within NATO, this presence has led to the development of extensive consultative structures that have fostered allied interaction on issues relating to nuclear weapons policy, planning, safety, security, and reliability. The discussions that have taken place within these structures have strengthened the alliance by forcing it to exercise its organizational machinery on a routine basis. They have also enhanced the alliance's confidence in its strength and cohesion, as well as its confidence in the probable perception of its resolve and capabilities by its potential adversaries.²⁶

At a higher level, maintaining an American presence overseas serves as a symbol of the nation's commitment to honor its treaty obligations and to reassure its friends that the United States is a reliable security partner. The positioning of US nuclear weapons in Europe is the clear implementation of this goal. Given the sensitive nature of these weapons, the fact that

they are positioned on foreign soil is a strong signal of US participation in the alliance. Without these weapons, there are concerns that the United States might distance itself from a crisis and possibly not honor its nuclear and other commitments.²⁷

OTHER BENEFITS

There have also been three ancillary benefits accrued as a consequence of NATO maintaining a nuclear capability. First, it has strengthened some of the conventional capabilities of the alliance. The requirements generated by the nuclear mission have provided some allied governments with a force structure justification for as they have approached parliaments for defense funding—particularly with regard to DCA. Second, the NATO nuclear capability has contributed to the non-proliferation of nuclear weapons in Europe. The presence of US nuclear weapons in Europe has served as a disincentive for other European states to develop a nuclear weapons capability. There has been sufficient confidence in the US honoring its NATO commitment that no other European state outside of the United Kingdom, France, and Russia has made the decision to develop a nuclear weapons capability. If the United States removed its nuclear weapons from Europe, there are questions as to whether Germany would pursue nuclear-power status.²⁸

Finally, United States' nuclear presence in Europe has contributed to the leading American role within the alliance. By tradition, the Supreme Allied Commander Europe position has always gone to an American officer even though the United States has not been the largest contributor of forces in Europe itself. Because the US retains custodial control over the weapons and is a major provider of the Dual Capable Aircraft (DCA) committed to the alliance, it does retain a leading role. Should the weapons be removed from Europe, a case could be made that there is no longer a reason for the United States to retain the Supreme Allied Commander Europe position. This would result in a diminished American voice within the alliance and possibly less interest in alliance affairs.

RESTRUCTURING THE NUCLEAR FORCE

Given these overarching objectives and the role nuclear weapons play in their accomplishment, the alliance should undertake a restructuring effort to produce a nuclear force relevant to the current strategic environment. Such an effort should address not only the need

for US weapons in Europe, but also the proper structure of whatever nuclear force is retained. Because the alliance is no longer facing a clearly defined threat, its focus for nuclear planning and force structure transformation should shift to emerging threats. This change in the nature of the threat would also drive a change in the nature of the execution of NATO's nuclear mission. That is; instead of a large-scale effort involving hundreds of weapons, a more likely scenario would be the use of one or two weapons in attacks directed against one or two facilities. This change in the nature of the mission would have implications for the composition of the European nuclear stockpile, the delivery vehicles, supporting forces, and perhaps drive a change to basing requirements.

The alliance's policy makers appear to be reluctant to make the necessary changes. There has not been an accompanying transformation to the alliance's nuclear forces since President Bush's 1991 initiative. This may be because of the composition of fragile coalition governments in the alliance and a heightened sensitivity to opening discussions regarding the basing and sizing of the US nuclear presence in Europe. The reaction to the stationing of Pershing II's and Ground Launched Cruise Missiles during the 1980's seems to have left in European defense leaders a sense that "nuclear issues are not a proper topic for the masses".²⁹ Should the composition of the nuclear force in Europe be brought into the alliance's policy fora, it could open a fissure between those seeking to adjust the size of the stockpile and those seeking a complete US nuclear withdrawal from Europe. However, if political consensus develops through open and transparent debate, then the support is likely to be firm.³⁰

Nevertheless, the alliance does have a position regarding the shape of the stockpile:

The alliance will therefore maintain adequate nuclear forces in Europe. These forces need to have the necessary characteristics and appropriate flexibility and survivability, to be perceived as a credible and effective element of the Allies' strategy in preventing war. They will be maintained at the minimum level sufficient to preserve peace and stability.³¹

Notwithstanding a future US nuclear presence on the continent, the alliance will for the foreseeable future retain nuclear forces as a part of its military capabilities. It should consider just what the necessary characteristics should be for those forces. To determine these characteristics, a determination must be made regarding the most likely target sets. With the

strategic environment indicating that the emerging threat posing the most risk to the alliance is one equipped with WMD, it would follow that the most likely target set would be against WMD-related sites and facilities. A generic set would include production facilities, storage sites, and launch facilities. This set would require a force with the capability to rapidly conduct WMD target planning, predict collateral damage, destroy a hard and deeply buried facility, and defeat chemical or biological agents.³² Besides these characteristics, the Strategic Concept also calls for nuclear forces that are flexible and survivable.

The current force, relying on UK SLBMs, US and allied DCA, and US gravity bombs seems to satisfy the need for flexibility and survivability. Similar to the concept of the Cold-War era Triad, the components of the current nuclear force each have their distinctive advantages and disadvantages. Submarine launched warheads offer the advantages of being extremely survivable and, at the appropriate stage of readiness, are somewhat responsive. With regard to disadvantages, there are risks associated with alerting the strategic early warning systems of neighboring states who, if detecting a launch from European waters, may be forced to operate in a compressed decision loop when determining if the launch is directed at their own territory or elsewhere. Additionally, there are concerns about the military effectiveness of an SLBM against the some potential target sets. The inherent characteristics of the UK SLBM are such that it has a Circular Error Probable (CEP) of 120 meters.³³ If the target is a hard and deeply buried facility, a 120-meter CEP with a substrategic warhead may not be sufficient to generate the damage required. Furthermore, such a facility would probably require a surface or near surface burst which has the additional effect of generating significant fallout.

An additional concern is that if the facility being struck contains chemical or biological agents, a substrategic weapon with a 120-meter CEP may not defeat the agent, but could instead serve as a means of release and dispersal. Agent defeat is typically understood to mean actually neutralizing the agent. In the context of a nuclear strike, this could entail a nuclear detonation sufficiently proximate to the targeted agent so that it would be consumed in the fireball. This would indicate a need for not only a tighter CEP, but also for an earth penetration capability if not to gain detonation in the vicinity of the agent then to generate sufficient ground shock to collapse the underground facility.

An additional disadvantage is that in the event of a crisis, a submarine does not serve as a highly visible symbol of alliance cohesion and burden sharing. Instead, it could carry the perception of being a UK effort only.

DCA-delivered gravity bombs however, have the ability to serve as effective symbols of alliance members collectively sharing the risks associated with a nuclear strike. United States weapons, launched from a base in the territory of one alliance member, and delivered from an airframe belonging to another alliance member, and supported by aviation assets (tankers, reconnaissance, electronic warfare) of several other member states are highly visible demonstrations of alliance unity. Additionally, the alerting and movement of DCA aircraft and supporting assets during a crisis would demonstrate that the alliance has useful flexible deterrent options. Another advantage is that once launched, a DCA sortie can always be recalled. The disadvantages of using DCA are that there are risks associated with penetrating an integrated air defense system. Also, there are concerns that the CEP associated with DCA-delivered weapons may not be sufficient to hold a hardened and deeply buried facility at risk.

With regard to the nuclear devices themselves, the targets associated with an emerging WMD threat may call for earth-penetrating weapons that have a precision or near-precision CEP. A robust earth penetration capability and small CEP are important characteristics from not only a targeting perspective, but a policy perspective as well. In attacking a deeply buried facility, the objective is to generate as much ground shock as possible directly over the facility. This ground shock creates a crushing mechanism that is vital to destroying the facility. A smaller CEP and a greater depth of penetration allow the use of weapons with smaller yields to generate effects that currently require higher explosive yields. Smaller yields have the impact of creating less fallout and collateral damage. In a highly controversial decision, Congress recently approved funding for the development of a low yield earth-penetrating weapon. Its inclusion in the Europe-based stockpile would require a policy decision by the alliance.

Along with the capabilities outlined above for the delivery systems and the weapons stockpile are those for nuclear strike planning and analysis. Whatever form the alliance's nuclear forces eventually take, a means of conducting target analysis, planning, hazard prediction, and sound nuclear decision-making must be in place and exercised to add credibility to the nuclear capability.

THE WAY AHEAD: THREE OPTIONS

NATO is currently undergoing an effort to transform itself to better address the current strategic environment. Concurrent with this effort is the transformation of US nuclear forces as directed by the Nuclear Posture Review. These two efforts, if synchronized, offer the alliance an opportunity to not only reduce its nuclear footprint, but to reshape its remaining nuclear forces consistent with the reform efforts of both the United States and its alliance partners. There are three options that should be considered: An updated version of the NATO Multilateral Force (MLF) concept that was attempted in the early 1960's, a reduction in the current nuclear stockpile with a basing emphasis in the alliance's Southern Region, and a termination of the US nuclear presence in Europe with NATO nuclear support being provided by CONUS-based USAF assets.

With regard to the first option, the alliance would create a standing multinational wing of DCA. The aircrew would be drawn from all countries that currently provide DCA units. In day-to-day practice, the activation of such a unit would not be insurmountable. NATO aircrews with a nuclear delivery mission already train to a common standard as laid out by the alliance's standardized evaluation process. Additionally, by agreement, personnel are required to possess certain security clearances and meet a personnel reliability program standard that is in line with US standards. The previous MLF effort failed, among other reasons, because of US concerns over retaining custody over nuclear weapons and other member states having a desire over veto power over nuclear strikes.³⁴ However, unlike the previous effort, there is now a system in place that addresses US custodial requirements. And, because a nuclear weapons employment decision will require consensus by the alliance membership anyway, each member of the alliance already has de facto veto authority. Furthermore, the alliance now has a record of operating successful multinational formations. Examples include the Standing Naval Force Atlantic, the Multinational Divisions operating in Bosnia, and the Allied Command Europe Rapid Reaction Corps. The composition of the wing could be tailored such that it would rely on one common airframe—preferably one that is already in service with several alliance members. To provide the alliance with a degree of flexibility, the subordinate units of the wing could be structured as deployable units with alliance members each providing a key competency. For example, the United States would provide the nuclear weapons custodial element, one state could provide the security force element, and another the communications element. The

planning cell could be built from pre-identified officers from the various NATO staffs plus augmentees from the United States Strategic Command. The DCA squadrons could come from both the United States and the European allies. Supporting aviation assets could come from contributions from non-DCA members. Should the alliance retain a nuclear presence in Europe, then this option offers the possibility of reducing the European-based stockpile.

However, under this concept nuclear weapons would not have to be necessarily stored in Europe, but could be pre-positioned at a storage depot in the United States and flown to Europe when required. Although this could be interpreted as a disadvantage because the alliance would have to accept the risk associated with the movement of nuclear weapons during crisis, such a movement could be useful as a flexible deterrent option in signaling allied resolve and unity during crisis.

The second option is less radical, emphasizing instead a reduction in the nuclear footprint. It essentially retains the current nuclear force structure but, in recognition of the potential for instability along the periphery of the alliance's Area of Responsibility, shifts the basing posture to the alliance's Southern Region. Under this concept, the alliance would respond to a threat with forces already in place. Like the first option, this option still gives alliance members a vehicle for justifying their force structure in national resourcing decisions. It also would keep US weapons in Europe, but perhaps within range of adversary WMD strikes. Furthermore the shift to basing in the alliance's Southern Region may present a perception that the chore of nuclear burden sharing is now being born primarily by those members below the Alps.

A final option would be to end the US nuclear presence in Europe and establish a NATO Nuclear Planning Element. This element, based in either Europe or the United States would be a multinational group charged with maintaining the alliance's nuclear planning capability and coordinating NATO planning efforts. The allies could also be tasked to provide the supporting conventional assets that would be needed for a nuclear strike mission. The alliance's nuclear weapons aerial delivery capability would then be borne solely by the United States. There are advantages. Going to a force that would deploy out of the United States has the practical effect of actually giving the alliance a militarily useful nuclear force that could take advantage of the Global Strike Task Force Concept and its synchronization of stealth, precision guidance, intelligence, surveillance, and reconnaissance (ISR) technologies.³⁵ Instead of relying on non-stealth DCA, NATO nuclear weapons delivery could take advantage of technologies already in

service with the United States. The use of stealth delivery platforms has the benefit of increasing the probability of successful aerial delivery. An additional degree of flexibility would also be added in that instead of relying on gravity bombs, the alliance could also plan on using US cruise missiles. This would however, require a change in alliance policy. It would also allow the alliance to take advantage of planning capabilities already extant in US organizations in either CONUS or Europe. Politically, the removal of nuclear weapons from Europe could also encourage the Russian Federation to downsize its own tactical nuclear forces.

However, there are disadvantages. The symbolism of burden sharing would be impacted with the perception of the United States accepting the majority of the political risks for the alliance. The United States might also lose much of the influence it enjoys within NATO fora as a consequence of maintaining a nuclear presence in Europe. And there is the possibility that potential adversaries might view the withdrawal of US nuclear forces as a signal of the US weakening its commitment to the alliance. Additionally, such a significant change to the alliance nuclear structure might generate a debate that could open political fissures that would be difficult to resolve.

CONCLUSION

This paper argues that NATO retain nuclear forces. However, the presence of US nuclear forces in Europe and the structure of NATO's nuclear forces should be evaluated by the alliance's policy bodies in the context of the current strategic environment. This evaluation should address a clearly articulated nuclear strategy that outlines a means for deterring potential adversaries and also reassures neighboring states that the alliance's nuclear posture is not offensively oriented. At the same time this strategy should state how alliance nuclear forces are to be structured and how that structure supports the political objectives while at the same time being militarily useful. While there is a risk that such a politically controversial evaluation could spark a debate exposing differences between alliance members, over the long term the alliance would be better served by undertaking this effort.

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ENDNOTES

¹ Robert S. Norris; William M. Arkin & William Burr, "Where They Were," *Bulletin of the Atomic Scientists* 55, no. 6 (November/December 1999): 29.

² George H. Quester, "The Unavoidable Importance of Nuclear Weapons," in *Alternative Nuclear Futures*, ed. John Baylis and Robert O'Neill (Oxford: University Press, 2000), 38.

³ "NATO Handbook 2001," updated 15 October 2002; available from <http://www.nato.int/docu/handbook/2001/hb0705.htm>; Internet; accessed 7 October 2003

⁴ "NATO Press Release NAC-S(99)65," 24 April 1999, available from <http://www.nato.int/docu/pr/1999/p99-065e.htm>; Internet; accessed 7 October 2003.

⁵ NATO Handbook 2001.

⁶ NATO Press Release NAC-S(99)65.

⁷ Ibid.

⁸ Paul Buteux, "Symbol or Substance? The Role of Nuclear Weapons in NATO's Updated Strategic Concept," *Canadian Military Journal* 1 (Winter 2000-2001): 45.

⁹ "NATO Press Statement 2003(064)," 12 June 2003, available from <http://www.nato.int/docu/pr/2003/p03-064e.htm>; Internet; Accessed 12 February 2004.

¹⁰ "UK Strategic Defense Review," Chapter 4, Paragraph 68, available from <http://www.mod.uk/issues/sdr/deterrence.htm>; Internet; accessed 5 February 2004.

¹¹ Stanley Sloan, "NATO Nuclear Strategy Beyond the Cold War," in *Controlling Non-Strategic Nuclear Weapons, Obstacles and Opportunities*, (USAF Academy, CO: Institute for National Security Studies, 2001) 49.

¹² NATO Press Release NAC-S(99)65.

¹³ Donald H. Rumsfeld, *The Nuclear Posture Review (Excerpts)*, available from <http://www.globalsecurity.org/wmd/library/policy/dod/npr.htm>; Internet; accessed 4 August 2003.

¹⁴ David S. Yost, *The US and Nuclear Deterrence in Europe*, Adelphi Paper 326, (London: International Institute for Strategic Studies, 1999) 14.

¹⁵ NATO Handbook 2001.

¹⁶ Bruno Tertrais, *Nuclear Policies in Europe*, Adelphi Paper 327, (London: International Institute for Strategic Studies, 1999) 14. Also see the UK Strategic Defence Review, op. cit.

¹⁷ Henry E. Eccles, "Strategy—*The Theory and Application*," *Naval War College Review* 32, May-June 1979, 11-21; quoted in "Deterrence," *Essays on Air and Space Power*, Volume 1, available from <http://www.cadre.maxwell.af.mil/ar/MENTOR/vol1/sec04.pdf>; Internet; accessed 18 January 2004.

¹⁸ "Deterrence," *Essays on Air and Space Power*, Volume 1, available from <http://www.cadre.maxwell.af.mil/ar/MENTOR/vol1/sec04.pdf>; Internet; accessed 18 January 2004.

¹⁹ Ibid.

²⁰ Buteux, 49.

²¹ *NATO Press Release NAC-S(99)65*.

²² Ibid.

²³ Buteux, 47.

²⁴ Tertrais, p. 45.

²⁵ Gregory S. Martin, "US National Security Strategy and the Imperative of Geo presence," *Air and Space Power Journal*, Summer 2003; available from <http://www.airpower.maxwell.af.mil/airchronicles/apj/apj03/sum03/martin.html>; Internet; accessed 17 October 2003.

²⁶ Yost, 8.

²⁷ Ibid.

²⁸ Ibid., 26.

²⁹ Douglas Erwin, "The United States and Nuclear Weapons in Europe," *Aerospace Power Journal*, Special Edition 1994; available from <http://www.airpower.maxwell.af.mil/airchronicles/apj/sum97/spe94/erwin.html>; Internet; accessed 7 October 2003.

³⁰ Ibid.

³¹ *NATO Handbook 2001*.

³² "Joint Warfighter Science and Technology Plan," available at http://www.fas.org/spp/military/docops/defense/97_jwstp/jw4j.htm#TABLE%20IV.J-1; Internet; accessed 5 February 2004

³³ See <http://web.ukonline.co.uk/aj.cashmore/.weapons/uk/.slbm.html>. The CEP is defined as the radius of a circle surrounding a target within in which 50% of the weapons should fall.

³⁴ John F Kennedy Library and Museum, "JFK Library Releases 1963 White House Recordings," available from http://www.cs.umb.edu/jfklibrary/pr_tapes_release_may2003.html; Internet; accessed 15 October 2003.

³⁵ John P Jumper, "*Global Strike Task Force*", available from <http://www.airpower.au.af.mil/airchronicles/apj/apj01/spr01/jumper.htm> ; Internet; accessed 4 August 2003.

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